Julia King

Question: How does use of bed alarms in elderly patients with mental health issues affect their fall rates?

Summary:

According to the CDC, there were 34,000 deaths in the U.S. caused by falls in adults 65 and older in 2019. Additionally, there were 3 million emergency room visits in 2019 due to falls in the older adult population (CDC, 2022). Bed alarms as a form of both preventing and decreasing fall rates in elderly patients with cognitive impairments have many components to consider. There are many barriers that decrease their effectiveness such as alarm-fatigue, improper implementation or lack of education regarding how to use them. Another important consideration is whether the correct type of alarm is being used for the correct population, and if the alarm is working/being maintained properly. For these reasons, there is concern about whether or not there is a true correlation between use of bed alarms and decreased fall rates (Mileski, et. al., 2019). In another study done over the use of in-hospital sensors for the prevention of falls, Cortés et. al., identified “a 20% increase in the risk of falling in hospitalized elderly patients exposed to sensors installed on the bed and chair.” While this seems counterintuitive, the point being made is that sensors are often ineffective due to malfunctions, not being implemented correctly, or creating a sense of false safety when in reality they aren’t working as they should be. Bed alarms need to be able to accurately interpret the movements of patients in order for them to truly be useful because otherwise they can cause more problems rather than solutions. It was found that other similar research articles came to the same conclusion, which is that no benefit is seen in patients who use bed alarms versus patients who do not. The authors of this research article suggest that further research be done about the use of mobile fall alarms rather than stationary ones to improve efficacy (Cortés et. al., 2021). However, according to Mileski et. al., “several studies mentioned how the proper use of alarms was an effective intervention for those with confusion, agitation, or dementia.” Using alarms can alert nurses to potential falls that are about to occur, and can increase the amount of patient-nurse interactions which has been shown to improve patients’ quality of care. These authors emphasize that a large part of the reason why bed alarms are considered ineffective is because of them being viewed as a standalone intervention. They argue that bed alarms should be part of a more comprehensive plan in fall prevention (Mileski et. al., 2019).

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Conclusion:

After reading these articles and looking at data regarding falls in elderly people who have cognitive impairments, I think that bed alarms have the potential to be effective when implemented correctly and with other interventions. Just like any other intervention, if it isn't used correctly, a bed alarm is not going to be useful in preventing falls. In fact, it can be more harmful because of creating a sense of false security. A similar example would be trying to use SCDs to prevent DVTs in a patient but not putting them on the patient correctly, or the machine unknowingly being broken. While I have seen bed alarms be effective in the hospital setting, I have also seen how they can be falsely relied upon. As a student nurse I have seen elderly patients with mental impairments getting out of bed, and the only reason that they didn't fall was because I happened to be walking by at the right time. In that instance, we found out that the bed alarm on that bed wasn't working. All this being said, I think that much more education and maintenance needs to be done in order for bed alarms to be more effective and worth the effort of implementing. Having a bed alarm in place does not automatically decrease the risk of falls in the elderly population. Like the authors of *Alarming and/or Alerting Device Effectiveness in Reducing Falls in Long-Term Care (LTC) Facilities? A Systematic Review* state, "fall prevention and intervention is most effective when a holistic approach is deployed to identify those who are at a risk of falling and multifaceted intervention and prevention measures are put in place to reduce these chances" (Mileski et al., 2019).

Works Cited:

Primary Resource:

Center for Disease Control and Prevention. (2022, September 6th). *Older Adult Fall Prevention.* https://www.cdc.gov/falls/index.html

Secondary Resources:

Cortés, O. L., Piñeros, H., Aya, P. A., Sarmiento, J., & Arévalo, I. (2021). Systematic review and meta-analysis of clinical trials: In-hospital use of sensors for prevention of falls. *Medicine*, *100*(41), e27467. https://doi.org/10.1097/MD.0000000000027467

Mileski, M., Brooks, M., Topinka, J. B., Hamilton, G., Land, C., Mitchell, T., Mosley, B., & McClay, R. (2019). Alarming and/or Alerting Device Effectiveness in Reducing Falls in Long-Term Care (LTC) Facilities? A Systematic Review. *Healthcare*, *7*(1), 51. MDPI AG. Retrieved from http://dx.doi.org/10.3390/healthcare7010051